

### REMARKS/ARGUMENTS

Entry of this amendment and favorable reconsideration by the Examiner are respectfully solicited.

In this response claim 1 has been restricted to the PP peptide which consists of SEQ ID NO: 1 and also to the modified PP peptide with an N-terminal cysteine residue. This modified PP peptide was used in some of the experiments described in the current patent application whereby the PP peptide was coupled to a carrier protein. See for instance example 3.

With reference to paragraph 3 of the Official Action, amended claim 1 is now clearly limited to only those peptides which have been experimentally shown to have the desired characteristics. The Examiner has acknowledged that these peptides are enabled by the present patent application. Therefore the objections under 35 U.S.C. 112 first paragraph are overcome for amended claim 1 and also for the dependent claims.

With reference to paragraph 4 of the Official Action, we submit that the indefiniteness objection to claim 1 under 35 U.S.C. 112 second paragraph has also been overcome by the amendments to claim 1. Claim 1 contains closed language that clearly specifies that the two claimed species of peptide consist either of SEQ ID NO: 1 or of SEQ ID NO: 1 with an additional N-terminal cysteine residue.

With reference to paragraph 5, claim 1 has been amended to overcome this informality.

With reference to paragraph 6, we note that Claim 4 is cancelled and hence the objection under 35 CFR 1.75 (c) is no longer relevant. Claim 6 as amended imposes a further limitation upon the peptide of parent claim 1. Thus, it is a dependent claim of narrower scope than the independent claim upon which it depends. In particular, amended claim 1 claims compounds comprising the specified PP peptide or PP peptide plus N-terminal cysteine residue *per se*. Amended claim 6 claims a compound comprising one of these same PP peptide variants coupled to a carrier protein. A claim to a peptide coupled to a carrier protein is of more restricted scope than a claim to the peptide *per se*.

This is explained more fully in paragraphs [59] and [60] of the present patent application as published, wherein the coupling of the PP peptide to a carrier protein such as KLH or BSA or as illustrated in US. Pat. No. 4,608,251; US. Pat. No. 5,945,104 and Wo 90/15878 is described.

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Also the fusion of the coding sequence of the PP peptide to another protein coding sequence at either the C- or N-terminal is also described.

The PP peptide corresponds to residues 153-177 of the PPL protein and therefore it is not possible by either of the coupling mechanisms described and claimed in amended claim 6 to reconstitute the full length PPL protein even if this were the intention of the inventors rather than to couple the PP peptide to a carrier protein such as KLH or BSA, so as to increase its immunogenicity. The situation envisaged by the examiner in which the C- and N-terminal fragments of the PPL protein are fused to the PP peptide is not encompassed within the scope of claim 6.

Claim 29 is also a dependent claim of narrower scope than the independent claim upon which it depends. Amended claim 1 claims compounds comprising the specified PP peptide or PP peptide plus N-terminal cysteine residue *per se*. Claim 29 claims compounds comprising the pharmaceutically acceptable salts of these peptides.

With reference to paragraphs 8, 9 and 10 of the Official Action, given that we have now restricted claim 1 to only the peptides described and so fully enabled by the present patent application, we submit that amended claims 1, 21, 22 and 29 are no longer be anticipated or rendered obvious by WO 01/59123. In addition, as explained above, amended claim 6 can not encompass the PPL protein and so is also novel and inventive with respect to the prior art.

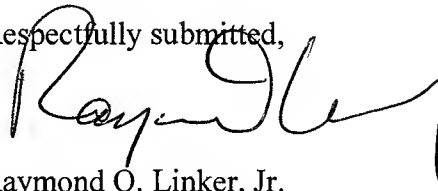
For the reasons noted, these amendments should place this application in condition for allowance. Entry of the amendments and formal notification of the allowance of all claims are solicited.

It is not believed that extensions of time or fees for net addition of claims are required, beyond those that may otherwise be provided for in documents accompanying this paper. However, in the event that additional extensions of time are necessary to allow consideration of this paper, such extensions are hereby petitioned under 37 CFR § 1.136(a), and any fee required

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therefor (including fees for net addition of claims) is hereby authorized to be charged to Deposit  
Account No. 16-0605.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Raymond O. Linker, Jr.', written over the typed name.

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